TIMBER GRIDS COMPANY
شركة تيمبر غريدز

TG FLOW
تي جي فلو

HDPE PIPING SYSTEMS

ENGINEERED FOR STRENGTH.
BUILT FOR RELIABILITY.

KINGDOM OF SAUDI ARABIA



About Us

TG FLOW, a brand of **Timber Grids Company**, is a Saudi-based manufacturer specializing in high-quality High-Density Polyethylene (HDPE) pipes and piping solutions. Established to support the Kingdom's growing infrastructure and industrial development, we provide reliable and durable products designed to meet the demands of modern projects.

Our solutions serve a wide range of applications, including water distribution, irrigation, sewage and drainage, telecommunications, electrical and cable protection, industrial networks, and gas infrastructure. We are committed to delivering products that combine durability, performance, and long-term reliability.

At **TG FLOW**, quality is at the heart of everything we do. Through controlled manufacturing processes, quality-focused production, responsive customer service, and continuous improvement, we strive to provide dependable solutions for contractors, developers, utilities, industries, and agricultural customers.

With our operations in Riyadh, Saudi Arabia, **TG FLOW** is committed to supporting the Kingdom's infrastructure growth, local industrial development, and the objectives of Saudi Vision 2030 while building lasting relationships with our customers and partners.



Our Vision

To become a trusted leader in innovative, sustainable, and high-quality HDPE pipeline solutions across Saudi Arabia and beyond. We aim to contribute to reliable, future-ready infrastructure while supporting sustainable development, industrial growth, and the ambitions of Saudi Vision 2030.

Our Mission

To empower contractors, developers, utilities, and the agricultural sector with dependable HDPE pipes and fittings that combine quality, performance, and value. We continuously strengthen our product range, manufacturing capabilities, customer support, and responsible environmental practices to meet evolving regional requirements.



Our Core Commitment

Our quality without compromise. From careful raw material selection and controlled production to thorough inspection, timely delivery, and dedicated customer support, we focus on maintaining consistency, reliability, and high performance at every stage. Our commitment is to provide durable, dependable piping solutions that deliver lasting value and performance.

Quality Consistency Reliability Support

Product Portfolio

TG FLOW provides a growing portfolio of polyethylene piping solutions for infrastructure, utility, agricultural, and industrial applications.

PE Pipes

Versatile polyethylene piping for fluid transport and cable protection across residential, agricultural, and industrial environments.

HDPE Water Pipes

Corrosion-resistant piping designed for water distribution, with strong impact performance and broad operating-temperature tolerance.

HDPE Electrical Pipes

Protective conduit solutions for power and communication cables, combining mechanical strength, insulation & chemical resistance.

PP Pipes

Polypropylene piping suitable for selected drinking-water, domestic supply, and heating applications.

HDPE Pipes

High-performance pipes offering flexibility, chemical resistance, impact resistance, and dependable service in demanding conditions.

HDPE Drainage Pipes

Durable drainage solutions with Best chemical stability, efficient flow characteristics, and strong resistance to shock

MPP Pipes

Pipes designed for cable protection and demanding installation environments, offering strong compressive & impact performance.

HDPE Fittings





Table 1

HDPE PE100 PIPE DIMENSION CONFORMING TO ISO4427, DIN8074
MRS 10, Design stress = 8 MPa

O.D.	PIPE SERIES - S																		O.D.
	20		12.5		10		8		6.3		5		4		3.2		2.5		
	Standard Dimension Ratio - SDR																		
	41		26		21		17		13.6		11		9		7.4		6		
	Nominal Pressure - PN																		
	PN 4		PN 6.3		PN 8		PN 10		PN 12.5		PN 16		PN 20		PN 25		PN 32		
	W.T mm	Weight Kg/M	W.T mm	Weight Kg/M	W.T mm	Weight Kg/M	W.T mm	Weight Kg/M	W.T mm	Weight Kg/M	W.T mm	Weight Kg/M	W.T mm	Weight Kg/M	W.T mm	Weight Kg/M	W.T mm	Weight Kg/M	
20	—	—	—	—	—	—	—	—	—	—	2.0	0.118	2.3	0.134	3.0	0.164	3.4	0.182	20
25	—	—	—	—	—	—	—	—	2.0	0.151	2.3	0.173	3.0	0.202	3.5	0.243	4.2	0.281	25
32	—	—	—	—	—	—	2.0	0.198	2.4	0.235	3.0	0.282	3.6	0.331	4.4	0.390	5.4	0.458	32
40	—	—	1.8	0.229	2.0	0.251	2.4	0.299	3.0	0.360	3.7	0.434	4.5	0.514	5.5	0.607	6.7	0.708	40
50	—	—	2.0	0.317	2.4	0.378	3.0	0.458	3.7	0.555	4.6	0.673	5.6	0.796	6.9	0.945	8.3	1.10	50
63	1.8	0.368	2.5	0.500	3.0	0.586	3.8	0.728	4.7	0.883	5.8	1.06	7.1	1.27	8.6	1.49	10.5	1.74	63
75	1.9	0.462	2.9	0.683	3.6	0.836	4.5	1.03	5.6	1.25	6.8	1.48	8.4	1.78	10.3	2.12	12.5	2.47	75
90	2.2	0.647	3.5	0.988	4.3	1.20	5.4	1.47	6.7	1.79	8.2	2.14	10.1	2.57	12.3	3.03	15.0	3.54	90
110	2.7	0.952	4.2	1.45	5.3	1.79	6.6	2.19	8.1	2.64	10.0	3.18	12.3	3.82	15.1	4.54	18.3	5.29	110
125	3.1	1.25	4.8	1.86	6.0	2.29	7.4	2.79	9.2	3.40	11.4	4.12	14.0	4.92	17.1	5.84	20.8	6.82	125
140	3.5	1.56	5.4	2.35	6.7	2.86	8.3	3.50	10.3	4.26	12.7	5.13	15.7	6.18	19.2	7.33	23.3	8.56	140
160	4.0	2.02	6.2	3.08	7.7	3.75	9.5	4.57	11.8	5.56	14.6	6.74	17.9	8.04	21.9	9.54	26.6	11.2	160
180	4.4	2.51	6.9	3.83	8.6	4.71	10.7	5.77	13.3	7.05	16.4	8.51	20.1	10.2	24.6	12.1	29.9	14.1	180
200	4.9	3.08	7.7	4.74	9.6	5.84	11.9	7.12	14.7	8.65	18.2	10.5	22.4	12.6	27.4	14.9	33.2	17.4	200
225	5.5	3.90	8.6	5.96	10.8	7.37	13.4	9.03	16.6	11.0	20.5	13.3	25.2	15.9	30.8	18.8	37.4	22.1	225
250	6.2	4.88	9.6	7.38	11.9	9.02	14.8	11.1	18.4	13.5	22.7	16.3	27.9	19.6	34.2	23.3	41.5	27.2	250
280	6.9	6.04	10.7	9.20	13.4	11.4	16.6	13.9	20.6	16.9	25.4	20.5	31.3	24.6	38.3	29.2	46.5	34.1	280
315	7.7	7.59	12.1	11.7	15.0	14.3	18.7	17.6	23.2	21.5	28.6	25.9	35.2	31.1	43.1	36.9	52.3	43.2	315
355	8.7	9.65	13.6	14.8	16.9	18.2	21.1	22.4	26.1	27.2	32.2	32.9	39.7	39.5	48.5	46.8	59.0	54.8	355
400	9.8	12.2	15.3	18.8	19.1	23.1	23.7	28.3	29.4	34.5	36.3	41.7	44.7	50.1	54.7	59.4	66.5	69.6	400
450	11.0	15.4	17.2	23.7	21.5	29.3	26.7	35.8	33.1	43.7	40.9	52.8	50.3	63.4	61.5	75.2	—	—	450
500	12.3	19.2	19.1	29.2	23.9	36.1	29.7	44.2	36.8	53.9	45.4	65.2	55.8	78.1	68.3	92.8	—	—	500
560	13.7	23.9	21.4	36.6	26.7	45.2	33.2	55.4	41.2	67.6	50.8	81.7	62.5	98.0	—	—	—	—	560
630	15.4	30.2	24.1	46.4	30.0	57.0	37.4	70.2	46.3	85.5	57.2	103	70.3	124.5	—	—	—	—	630
710	17.4	38.4	27.2	59.0	33.9	72.6	42.1	89.0	52.2	109	64.5	131	79.3	158.3	—	—	—	—	710
800	19.6	48.7	30.6	74.7	38.1	92.0	47.4	113	58.8	138	72.6	167.42	89.3	200.9	—	—	—	—	800
900	22.0	61.3	34.4	94.4	42.9	116	53.3	143	66.1	174	81.7	211	—	—	—	—	—	—	900
1000	24.5	75.9	38.2	117	47.7	144	59.3	176	73.5	216.09	90.2	260	—	—	—	—	—	—	1000
*1200	29.4	109	45.9	168	57.2	207	71.1	254.9	88.2	311.11	—	—	—	—	—	—	—	—	*1200
*1400	34.3	149	53.5	230	66.7	281	83.0	347	102.8	423	—	—	—	—	—	—	—	—	*1400
*1600	39.2	194	61.2	298	76.2	368.9	94.8	453	117.5	552.52	—	—	—	—	—	—	—	—	*1600

Note: * Can be Supplied On Special Request

W.T - Wall thickness, OD - Outside Diameter, SDR - Standard Dimension Ratio, S - Pipe Series, PN - Nominal Pressure

Note: Only Product Bearing The NSF Mark Are Certified (20mm to 630mm)

Table 2 HDPE Pipe Dimension As Per Din 8074-1999E Specifications

Design Stress = 5.0 MPa

O.D.	S 12.5		S 8.3		S 5		S 3.2	
	SDR 26 PN 4		SDR 17.6 PN 6		SDR 11 PN 10		SDR 7.4 PN 16	
	W.T	Weight	W.T	Weight	W.T	Weight	W.T	Weight
mm	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m
16					1.8	0.084	2.2	0.090
20					1.9	0.112	2.8	0.158
25			1.8	0.137	2.3	0.171	3.5	0.245
32			1.9	0.187	2.9	0.279	4.4	0.393
40	1.8	0.228	2.3	0.285	3.7	0.430	5.5	0.617
50	2.0	0.314	2.9	0.440	4.6	0.666	6.9	0.936
63	2.5	0.494	3.6	0.688	5.8	1.05	8.6	1.47
75	2.9	0.675	4.3	0.976	6.8	1.47	10.3	2.14
90	3.5	0.978	5.1	1.39	8.2	2.12	12.3	3.07
110	4.2	1.43	6.3	2.08	10.0	3.14	15.1	4.51
125	4.8	1.84	7.1	2.66	11.4	4.08	17.1	5.83
140	5.4	2.32	8.0	3.34	12.7	5.08	19.2	7.40
160	6.2	3.04	9.1	4.35	14.6	6.67	21.9	9.52
180	6.9	3.84	10.2	5.48	16.4	8.46	24.6	12.10
200	7.7	4.69	11.4	6.79	18.2	10.4	27.4	14.90
225	8.6	5.96	12.8	8.55	20.5	13.1	30.8	18.90
250	9.6	7.34	14.2	10.6	22.7	16.2	34.2	23.30
280	10.7	9.16	15.9	13.2	25.4	20.3	38.3	29.06
315	12.1	11.7	17.9	16.7	28.6	25.7	43.1	36.73
355	13.6	14.7	20.1	21.2	32.2	32.6	48.5	46.55
400	15.3	18.7	22.7	26.9	36.2	41.4	54.7	59.17
450	17.2	23.6	25.5	34.0	40.9	52.4	61.5	74.82
500	19.1	29.1	28.3	41.9	45.4	64.6	68.3	92.45
560	21.4	36.4	31.7	52.5	50.8	81.1		
630	24.1	46.2	35.7	66.5	57.2	102.6		
*710	27.2	58.7	40.2	84.4	64.5	130.01		
*800	30.6	74.3	45.3	107.0				
*900	34.4	93.98	51.0	136.8				
*1000	38.2	115.7	56.7	168.52				
*1200	45.9	167.0	68.0	242.47				

Note:* Can be supplied on special request; W.T- Wall thickness; O.D-Outside Diameter; SDR- Standard Dimension Ratio; S-Pipe Series & PN-Nominal Pressure

Table 3 HDPE PE 80 PIPE DIMENSION CONFORMING TO ISO 4427/ DIN 8074

Design Stress = 6.3 MPa

O.D.	S 10		S 6.3		S 5		S 4	
	SDR 21 PN 6.3		SDR 13.6 PN 10		SDR 11 PN 12.5		SDR 9 PN 16	
	W.T	Weight	W.T	Weight	W.T	Weight	W.T	Weight
mm	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m
16							1.8	0.085
20			1.8	0.108	1.9	0.113	2.3	0.134
25			1.9	0.145	2.3	0.172	2.8	0.201
32			2.4	0.234	3.0	0.273	3.6	0.328
40	1.9	0.241	3.0	0.36	3.7	0.432	4.5	0.511
50	2.4	0.377	3.7	0.55	4.6	0.669	5.6	0.791
63	3.0	0.584	4.7	0.9	5.8	1.05	7.1	1.27
75	3.6	0.834	5.6	1.2	6.8	1.48	8.4	1.77
90	4.3	1.2	6.7	1.8	8.2	2.13	10.1	2.55
110	5.3	1.8	8.1	2.6	10.0	3.15	12.3	3.80
125	6.0	2.3	9.2	3.4	11.4	4.10	14.0	4.89
140	6.7	2.8	10.3	4.2	12.7	5.10	15.7	6.14
160	7.7	3.7	11.8	5.5	14.6	6.70	17.9	7.90
180	8.6	4.7	13.3	7.0	16.4	8.46	20.1	10.1
200	9.6	5.8	14.7	8.6	18.2	10.44	22.4	12.5
225	10.8	7.3	16.6	10.9	20.5	13.16	25.2	15.9
250	11.9	9.0	18.4	13.5	22.7	16.27	27.9	19.5
280	13.4	11.3	20.6	16.9	25.4	20.39	31.3	24.4
315	15.0	14.3	23.2	21.3	28.6	25.71	35.2	30.9
355	16.9	18.1	26.1	27.0	32.2	32.64	39.7	39.3
400	19.1	23.0	29.4	34.2	36.2	41.47	44.7	49.8
450	21.5	29.0	33.1	43.4	40.9	52.52	50.3	63.0
500	23.9	35.9	36.8	55.5	45.4	64.77	55.8	77.6
560	26.7	44.9	41.3	67.3	50.8	81.14	61.5	98.86
630	30.0	56.6	46.3	85.0	57.2	102.0		
*710	33.9	72.3	52.2	107.7	64.5	131.46		
*800	38.1	91.7	58.8	136.9				
*900	42.9	115.7	66.1	174.21				
*1000	47.7	142.9						
*1200	57.2	206.3						

Note:* Can be supplied on special request; W.T- Wall thickness; O.D-Outside Diameter; SDR- Standard Dimension Ratio; S-Pipe Series & PN-Nominal Pressure

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Application

LDPE pipe which is especially suited to the Saudi Arabia climate is intended for use in above or below ground drip irrigation networks. This system optimizes the use of water in arid regions by supplying water at low pressure, exactly where it is needed directly to the roots of the plant. Loss by evaporation is minimized and water consumption is conserved.

Table 4 LDPE Pipe Dimensions based on DIN 8072 from sizes 16mm to 32mm OD with a working pressure of 4 bars at 20°C.

Outside Diameter	Wall Thickness
16 mm	1.2 mm / 1.5 mm
20 mm	1.5 mm
25 mm	1.5 mm / 2.0 mm
32 mm	2.0 mm

Table 5 LDPE Pipe Dimensions based on Australian Standard AS 2698.1 for drip irrigation tubing (type 30), with a working pressure of 3 bars at 20°C.

Nominal Size (MM)	Nominal Inside Diameter (MM)	Nominal Thickness (MM)	Nominal Weight (kg/m)
13	12.0	1.2	0.051
16	16.0	1.2	0.062
19	19.1	1.3	0.080
25	25.4	1.5	0.121
32	31.7	2.0	0.200

Table 6 GR Dripline, Lengths for 10% Flow Variation on Ground with Zero Slope. Single Emitter Combination.

Code No.	S cm	Q LPH	Wt. Kg.	Code No.	S cm	Q LPH	Wt. Kg.	Code No.	S cm	Q LPH	Wt. Kg.
GR 16433	33	4	22.95	GR 16250	40	2	21.80	GR 20450	40	4	31.00
GR 16449	40	4	22.45	GR 16250	50	2	21.45	GR 20450	50	4	30.00
GR 16450	50	4	21.75	GR 16260	60	2	21.00	GR 20460	60	4	29.25
GR 16460	60	4	21.25	GR 16275	75	2	20.75	GR 20475	75	4	28.00
GR 16475	75	4	20.75								

Table 7 Physical Properties of LDPE

Property	Value
Density (23°C)	0.923 g/cm³
Melt Index (190°C/2.16 kg)	1.0 g/10 min
Brittleness Temperature	<-70°C
Tensile Strength	11.5 MPa
Elongation at Break	800%
Flexural Modulus	220 MPa
Melting Temperature	124°C
Carbon Black Content	2%

Table 8_1 - Dimensions Based on SEC SPECIFICATION 23-SDMS-01 and DIN 8074

HDPE SDR	Nominal Outside Diameter (mm)	Nominal Internal Diameter (mm)	Noninal Wall Thickness (mm)	Nominal Weight Kg/m	SDR Class
Duct Type	20	16.4	1.8	0.106	SDR 17
	32	28.2	1.9	0.189	SDR 17
	40	35.2	2.4	0.294	SDR 17
	50	44.00	3.0	0.452	SDR 17
Mini-Duct	75	68.20	3.4	0.806	SDR 22
	110	100	5.0	1.67	SDR 22



Table 8_2 - Dimensions Based on STC SPECIFICATION VD 101 and DIN 8074

HDPE	Nominal Outside Diameter (mm)	Nominal Internal Diameter (mm)	Nominal Wall Thickness (mm)	Nominal Weight Kg/m	SDR Class
Micro-Duct	10	6	2	0.052	
	12	8	2	0.0653	
	20	16.4	1.8	0.108	SDR 10
	20	16	2.0	0.118	SDR 10
Mini-Duct	25	20.00	2.5	0.183	SDR 10
	32	28.2	1.9	1.189	SDR 17
	40	35.2	2.4	0.294	SDR 17
	50	44.00	3.0	0.452	SDR 17
	63	55.40	3.8	0.729	SDR 17
Main-Duct	75	68.20	3.4	0.806	SDR 22
	110	100	5.0	1.67	SDR 22

Standard Length: 300m to 500m. Other lengths are available on request.
The color of HDPE Duct is black. Other colors are available on request.

Table 9 HDPE Fiber Optic Ducts with orange stripe as per DIN 8074/ISO 4427, PE 100 SDR11

Size	Wall Thickness	Weight / Meter
110MM	10 MM	3.17 kg/m
125 MM	11.4MM	4.12 kg/m



Standard Length: 100m to 200m

Advantages of JSPF HDPE Duct

- Flexible & light weight which allows remarkable direction changes without the use of joints.
- Smooth bore with very low friction for cable placement.
- Excellent shock-resistant even at low temperature.
- Corrosion resistant & highly resistant to most chemical agents and micro-organisms.
- Good weathering resistant & the black color is effective protection against Ultra-Violet Radiation.

Specifications

TG FLOW offers project-oriented pipe configurations designed to meet varied infrastructure requirements.

Diameter Range

16 mm to **315 mm - 355 mm** to **1600 mm** available upon special request

Standard Lengths

6 meters, 12 meters, lengths for selected diameters including from **110 mm** to **315 mm** as specified in the current product range.

Coil Supply

Coils up to **100 m** for for smaller diameter pipes including **16 mm** to **125 mm**

Color Options

- Black with blue extruded stripes for potable-water applications
- Black for sewage and cable-duct applications
- Custom colors available upon request








Applications & Industries

Water & Municipal Infrastructure

Reliable piping for urban water distribution, building supply networks, utility extensions, and infrastructure projects

Sewage, Drainage & Road Projects

Durable solutions for drainage, wastewater, stormwater, and utility crossings where strength and long-term performance are required.

Irrigation & Agriculture

Efficient piping for agricultural water conveyance, irrigation networks, and water management projects supporting modern farming

Telecommunications & Power

Protective piping and ducting for communication, fiber, and electrical cables, supporting organized and secure infrastructure deployment.

Industrial & Utility Systems

HDPE solutions for selected industrial fluid, utility, and process support applications where corrosion resistance and flexibility are valuable.

Gas Distribution

HDPE piping can provide durable, flexible solutions for approved gas-distribution applications when designed and installed to applicable standards.







Manufacturing & Quality Assurance

Manufacturing Excellence

TG FLOW focuses on controlled manufacturing processes, modern production capability, and consistent product quality. Our production approach is designed to maintain dimensional accuracy, material integrity, and dependable pipe performance.

Quality Control

An integrated quality-control approach supports inspection of incoming raw materials and finished products. Testing and verification help maintain consistency and support compliance with applicable international standards.

Quality Priorities

- Virgin raw-material focus for specified HDPE products
- Controlled extrusion and production processes
- Dimensional and visual inspection
- Finished-product quality checks
- Traceability and documentation where required
- Continuous improvement in manufacturing and service

Our Certifications;

Why Choose TG FLOW?

A Reliable Manufacturing Partner

TG FLOW combines Saudi-based operations, specialized HDPE expertise, product breadth, and customer-focused support to serve infrastructure and industrial projects across the Kingdom.

- Saudi-based manufacturing presence
- 20+ years of technical and manufacturing heritage
- Advanced production capability
- Quality-focused manufacturing and inspection
- Wide range of HDPE and related piping solutions
- Project-oriented technical support
- Responsive inquiry and quotation assistance
- Reliable delivery coordination
- Solutions for water, irrigation, drainage, telecom, electrical, industrial and other applications

Our Clients



TG FLOW
تي جي فلو
HDPE PIPING SYSTEMS

Let’s Build Reliable Infrastructure

Your HDPE piping partner in Saudi Arabia

+966 550 183 140
+966 55 244 3305

Industrial City, Al Kharj Road,
Riyadh, Saudi Arabia

info@timbergrids.com

www.timbergrids.com

TIMBER GRIDS COMPANY
شركة تيمبر غريدز

TG FLOW